# Before the FEDERAL COMMUNICATIONS COMMISSION Washington, D.C. 20554

In the Matter of	
Expanding Flexible Use of the 3.7 to 4.2 GHz Bar	and) GN Docket No. 18-122
Petition for Rulemaking to Amend and	) RM-11791
Modernize Parts 25 and 101 of the	)
Commission's Rule to Authorize and	)
Facilitate the Deployment of Licensed	)
Point-to-Multipoint Fixed Wireless	)
Broadband Service in the 3.7-4.2 GHz Band	)
	)
Fixed Wireless Communications Coalition,	) RM-11778
Inc., Request for Modified Coordination	)
Procedures in Band Shared Between the	)
Fixed Service and the Fixed Satellite Service	
	)

#### COMMENTS OF CHARTER COMMUNICATIONS, INC.

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### TABLE OF CONTENTS

INTRO	ODUCTION AND SUMMARY	1
I.	MAXIMIZING THE AMOUNT OF C-BAND SPECTRUM THAT IS AVAILABLE FOR 5G WILL ENABLE THE UNITED STATES TO WIN THE GLOBAL 5G RACE	2
II.	RECEIVE-ONLY EARTH STATION REGISTRANTS ARE LICENSEES UNDER THE COMMUNICATIONS ACT	4
III.	EARTH STATION LICENSEES SHOULD RECEIVE COMPENSATION FOR THEIR COSTS TO RELOCATE TO FIBER TO MAXIMIZE THE AMOUNT OF C-BAND SPECTRUM AVAILABLE FOR 5G	7
CONC	CLUSION	11

#### INTRODUCTION AND SUMMARY

Charter Communications, Inc. ("Charter" or the "Company") files these comments in response to the Commission's May 3, 2019 Public Notice regarding the rights of receive-only earth station operators as Commission licensees. As the Commission and commentators have repeatedly recognized, it is crucial for the United States to lead in the deployment of fifthgeneration ("5G") services. Charter is eager to make 5G available to the American public, and has undertaken significant efforts to do so. The Company is actively investing in technologies that will combine its high-capacity, high-compute wireline network with innovative Wi-Fi and wireless access technologies that will provide ultrafast, low latency broadband to its customers across the 41 states it serves.

To really "win" the race to 5G, providers need access to more spectrum suited for 5G services. The 3.7-4.2 GHz spectrum band ("C-Band") is ideal for the deployment of 5G, as it will enable wider channel bandwidths for true 5G speeds while also offering much better RF propagation characteristics than millimeter wave spectrum. Given this, Charter urges the Commission to maximize the amount of C-Band spectrum that is cleared for terrestrial use. As Charter has previously explained, the fairest and most efficient means for accomplishing this is through a Commission-led competitive bidding process that satisfies the requirements of the Communications Act ("Act").<sup>2</sup> Such an approach will ensure that 5G spectrum is put to its highest and best use without favoring any particular party or parties.<sup>3</sup>

<sup>&</sup>lt;sup>1</sup> International Bureau and Wireless Telecommunications Bureau Seek Focused Additional Comment In 3.7-4.2 GHz Band Proceeding, Public Notice, GN Docket No. 18-122, DA 19-385 (rel. May 3, 2019).

<sup>&</sup>lt;sup>2</sup> 47 U.S.C. § 309(j)(1) (the Commission has the authority to "grant the license or permit to a qualified applicant through a system of competitive bidding"); Letter from Elizabeth Andrion, Senior Vice President, Regulatory Affairs, Charter Communications, Inc., to Marlene H. Dortch, Secretary, FCC, at 2, 3-4, GN Docket No. 18-122 (Feb. 22, 2019) ("Charter Feb. 22 Ex Parte").

<sup>&</sup>lt;sup>3</sup> See Charter Feb. 22 Ex Parte at 4.

To help accomplish this and ensure video customers continue to receive the same high quality service they receive today, existing C-Band earth station operators will need to transition to alternative means of obtaining the services they currently receive via satellite. Prior FCC decisions have made clear that C-Band earth station operators are Commission licensees. As Commission licensees, earth station operators are eligible for compensation for this transition under the long-standing *Emerging Technologies* framework that compensates incumbent licensees for their transition costs. 4 Under this framework, earth station operators should be compensated for their costs of transitioning to new distribution systems, including to fiber delivery, to maximize the redeployment of the C-Band for 5G. As Commission licensees, moreover, earth station operators would also be eligible for incentive payments for relinquishing their spectrum usage rights, or for an equivalent "reserve charge" as Charter has previously proposed.<sup>5</sup> Clarifying the eligibility of earth station operators for compensation under these frameworks will serve the public interest by facilitating the reallocation of the C-Band to 5G use in a manner that is fair to all incumbent users of the band and promotes the wide scale deployment of 5G in rural, suburban, and urban communities across the country.

# I. MAXIMIZING THE AMOUNT OF C-BAND SPECTRUM THAT IS AVAILABLE FOR 5G WILL ENABLE THE UNITED STATES TO WIN THE GLOBAL 5G RACE

Access to 5G spectrum is a key component to ensuring the technological advancement and economic security of the United States. By some estimates, the United States is poised to create over one million jobs and gain almost \$274 billion in additional GDP if a substantial

<sup>&</sup>lt;sup>4</sup> In re Service Rules for Advanced Wireless Services in the 2000-2020 MHz and 2180-2200 MHz Bands, Report and Order and Order of Proposed Modification, 27 FCC Rcd 16102, 16207 ¶ 289 (2012) ("AWS-4 Report & Order") ("Generally, the Commission applies the [Emerging Technologies] procedures when it is necessary to relocate incumbent licensees to introduce new services into a frequency band.").

<sup>&</sup>lt;sup>5</sup> See Charter Feb. 22 Ex Parte at 5-6.

amount of this spectrum is made available for wireless broadband use.<sup>6</sup> In order to reap these benefits, however, the Commission must maximize the amount of C-Band spectrum that is made available for 5G use, particularly in light of China's reallocation of 500 megahertz of mid-band spectrum for 5G. As Charter has previously demonstrated,<sup>7</sup> the quickest and most efficient means of accomplishing this critical goal is for the FCC to fulfill its statutory responsibility and award 5G licenses through a Commission-led system of competitive bidding that satisfies the requirements of the Act.

The Commission has used just such an approach for the past quarter-century to successfully repurpose a wide range of spectrum bands, including those previously allocated for satellite use. In contrast to an opaque process run by private parties who have a self-interest in limiting the supply of 5G spectrum, a Commission-led process will ensure that the maximum amount of C-Band spectrum is reallocated for 5G and that this repurposed spectrum is put to its highest and best use in the least amount of time. As Charter has previously described, the litigation risks that arise from the CBA's proposal are well-documented in the FCC record, and could delay deployment of 5G services for years. Moreover, the transparency and fairness available only from the Commission will promote confidence in the integrity of the auction process that in turn will promote more extensive participation in the auction.

Utilization by the Commission of the spectrum management tools provided in the Communications Act is therefore the surest way to foster the most widespread deployment of 5G

<sup>&</sup>lt;sup>6</sup> See id. at 1-2.

<sup>7</sup> See id.

<sup>&</sup>lt;sup>8</sup> See id. at 7-13.

in the C-Band. Further, pursuing this well-established framework will not delay the availability of this important spectrum for 5G use.<sup>9</sup>

### II. RECEIVE-ONLY EARTH STATION REGISTRANTS ARE LICENSEES UNDER THE COMMUNICATIONS ACT

The Public Notice asks whether receive-only earth station registrants are licensees under the Act. Clearly, they are. Under the Act, a "license" is defined as an "instrument of authorization . . . for the use or operation of apparatus for transmission of energy, or communications, or signals by radio, by whatever name the instrument may be designated by the Commission." While receive-only devices do not themselves engage in transmission, the Act explains that the transmission of energy by radio "includes both such transmission and all instrumentalities, facilities, and services incidental to such transmission." A receive-only earth station is an "apparatus" that is "incidental" to a satellite operator's transmissions, and therefore, a receive-only earth station registrantion meets the basic definition of a "license," as set forth in the Communications Act, irrespective of the terminology used. 12

Importantly, actions taken by the Commission in the 1979 Deregulation Order and the 1991 Streamlining Order to minimize the regulatory oversight of receive-only earth stations do not alter this conclusion. First, as T-Mobile has explained, "[t]he 1979 Deregulation Order merely eliminated 'mandatory licensing' of receive-only earth stations in order to reduce

<sup>&</sup>lt;sup>9</sup> See id. at 2-5.

<sup>&</sup>lt;sup>10</sup> 47 U.S.C. § 153(49).

<sup>&</sup>lt;sup>11</sup> 47 U.S.C. § 153(57); *In re Regulation of Domestic Receive-Only Satellite Earth Stations*, First Report and Order, 74 FCC 2d 205, 217 ¶ 31 (1979) ("1979 Deregulation Order") (stating that the Commission's "power to regulate receive-only earth stations is ancillary to [its] other regulatory responsibilities to maximize effective use of satellite communications").

<sup>&</sup>lt;sup>12</sup> See Letter from Russell H. Fox, Counsel to T-Mobile, USA, Inc., to Marlene H. Dortch, Secretary, FCC, at 2, GN Docket No. 18-122 (Mar. 19, 2019) ("*T-Mobile March C-Band Letter*").

regulatory burdens; it did not change their statutory status."<sup>13</sup> Indeed, as the Commission has previously said, the intent of the *1979 Deregulation Order* was simply "to eliminate mandatory licensing for domestic receive-only satellite earth stations and to reduce regulatory burdens."<sup>14</sup> In fact, the *1979 Deregulation Order* still provided receive-only earth stations with the option of being licensed in order to receive protection from interference.<sup>15</sup>

Likewise, the *1991 Streamlining Order* did not alter the regulatory classification of earth station operators. <sup>16</sup> In the *1991 Streamlining Order*, the Commission examined the then-existing optional licensing procedures for domestic receive-only earth stations and opted to create an even more streamlined approach by establishing a "registration program" so as to "continue the deregulatory process" and allow both licensees and the Commission to "benefit from the efficiencies" the new rules created. <sup>17</sup> Effectively, however, this alteration was one in name only. The revised rules were not intended to, and did not in practice, substantively change the rights of earth station operators. <sup>18</sup> Specifically acknowledging that "[s]everal commenters . . . express concern that the registration of a receive-only earth station may not afford the same protection

<sup>&</sup>lt;sup>13</sup> T-Mobile March C-Band Letter at 3 (citing 1979 Deregulation Order, 74 FCC 2d at 218-19 ¶ 34).

<sup>&</sup>lt;sup>14</sup> In re 220 TELEVISION for Modification of its License for Earth Station KB–96, Memorandum Opinion, Order and Authorization, 88 FCC 2d 258, 278 ¶ 44 (1981).

<sup>&</sup>lt;sup>15</sup> See T-Mobile March C-Band Letter at 3.

<sup>&</sup>lt;sup>16</sup> In re Amendment of Part 25 of the Commission's Rules & Regulations to Reduce Alien Carrier Interference Between Fixed-Satellites at Reduced Orbital Spacings & to Revise Application Processing Procedures for Satellite Commc'ns Servs., First Report and Order, 6 FCC Rcd 2806 (1991) ("1991 Streamlining Order").

 $<sup>^{17}</sup>$  Id. at 2806-07 ¶¶ 3, 4.

<sup>&</sup>lt;sup>18</sup> See, e.g., Letter from Pantelis Michalopoulos, Counsel to American Cable Association, to Marlene H. Dortch, Secretary, FCC, at 2 n.2, GN Docket No. 18-122 (Feb. 12, 2019) ("While the Commission streamlined rules applicable to C-band earth station operators in 1991 to replace licenses with registrations, it did so simply because receive-only earth stations present no potential for interfering with the rights of others, not because the rights of earth station users have somehow lesser dignity than those of satellite operators.").

from interference as a license,"<sup>19</sup> the Commission provided assurances that "a registration program will afford the same protection from interference as would a license issued under our former procedure."<sup>20</sup> It is evident then that this change was meant only to simplify the regulatory burdens imposed on receive-only earth stations.<sup>21</sup>

This conclusion is also not disturbed by the Commission's characterization in 2015 of receive-only earth station registrations as "neither construction permits nor station licenses."<sup>22</sup> This statement must be limited to the context in which it was made—the Commission's consideration of a proposal to streamline the process for *pro forma* assignments or transfers of control of receive-only earth stations. Moreover, as T-Mobile suggests, it does not indicate any intent by the Commission to reverse its earlier determination in the *1979 Deregulation Order* that the Commission's "power to regulate receive-only earth stations is ancillary to [its] other regulatory responsibilities to maximize effective use of satellite communications" and that it is the Commission's "policy to exercise [its] administrative discretion under the spectrum regulation provisions of Title III."<sup>23</sup> Accordingly, the reduction of administrative burdens on receive-only earth stations did not in any way diminish their regulatory status or the

<sup>&</sup>lt;sup>19</sup> 1991 Streamlining Order, 6 FCC Rcd at 2807 ¶ 5.

 $<sup>^{20}</sup>$  *Id.* at 2807 ¶ 7.

<sup>&</sup>lt;sup>21</sup> In re Amendment of the Commission's Space Station Licensing Rules & Policies, Second Report and Order in IB Docket No. 02-34, Second Report and Order in IB Docket No. 00-248, and Declaratory Order in IB Docket No. 96-111, 18 FCC Rcd 12507, 12514 ¶ 15 n.28 (2003) (stating that in the 1979 Deregulation Order, the Commission "adopted a permissive rather than a mandatory licensing scheme," and that the 1991 Streamlining Order "replaced this permissive licensing regime with a more streamlined registration procedure").

<sup>&</sup>lt;sup>22</sup> In re Comprehensive Review of Licensing and Operating Rules for Satellite Services, Second Report and Order, 30 FCC Rcd 14713, 14810  $\P$  306 (2015).

<sup>&</sup>lt;sup>23</sup> 1979 Deregulation Order, 74 FCC 2d at 217 ¶ 31; see also T-Mobile March C-Band Letter at 4 ("The Commission took no action in [the 2015] proceeding to reverse, or suggest that it intended to reverse, the determination in the 1979 Deregulation Order that Title III policies and procedures apply to receive-only earth station registrations.").

Commission's ability to regulate them. The Commission therefore should reaffirm that earth station registrations are licenses as defined by the Communications Act.

## III. EARTH STATION LICENSEES SHOULD RECEIVE COMPENSATION FOR THEIR COSTS TO RELOCATE TO FIBER TO MAXIMIZE THE AMOUNT OF C-BAND SPECTRUM AVAILABLE FOR 5G

Charter supports reallocating as much C-Band spectrum as possible in order to maximize 5G utilization of this band. To facilitate this clearing, the Commission should ensure that receive-only earth station operators are compensated for their costs of relocating from the C-Band. As licensees, C-Band earth station operators are eligible for compensation under the Commission's long-standing *Emerging Technologies* framework. To promote the greatest possible reallocation of C-Band spectrum, compensation should include the cost of transitioning to fiber delivery. Likewise, earth station operators would be eligible for incentive payments for relinquishing their spectrum usage rights or equivalent "reserve charge" payments, as Charter has proposed.

The Commission has required winning bidders in spectrum auctions to reimburse incumbent licensees for their relocation costs since the earliest auctions.<sup>24</sup> This process can be readily applied to the relocation of earth station operators. In particular, under the *Emerging Technologies* framework, incumbent users of a band must be afforded comparable replacement facilities that will allow them to maintain their same services in terms of throughput, reliability, and operating costs.<sup>25</sup> In this instance, comparable facilities should include extensive reliance on

<sup>&</sup>lt;sup>24</sup> See In re Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, First Report and Order and Third Notice of Proposed Rulemaking, 7 FCC Rcd 6886, 6886, 6890 ¶¶ 1, 24 (1992); In re Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems, Ninth Report and Order and Order, 21 FCC Rcd 4473, 4495-96, 4505 ¶¶ 39-40, 58 (2006) ("AWS Relocation Order"); Teledesic LLC v. FCC, 275 F.3d 75, 78-79, 85-86 (D.C. Cir. 2001).

<sup>&</sup>lt;sup>25</sup> AWS Relocation Order, 21 FCC Rcd at 4485-86 ¶ 21.

fiber transmission rather than relying solely on the launch of additional satellites (as the C-Band Alliance ("CBA") has proposed and its vendors support, not surprisingly).<sup>26</sup> Transitioning earth station operators to fiber also will avoid any holdout problem<sup>27</sup>—and enable the Commission to clear far more than the 200 MHz of C-Band spectrum proposed by the CBA.<sup>28</sup>

Of particular relevance here, since the original adoption of its *Emerging Technologies* framework, the Commission has modified its relocation procedures in recognition of the need "to address unique characteristics of the new entrants, incumbent operations and/or nature of the reallocated spectrum."<sup>29</sup> The Commission has likewise acknowledged that "[t]he application of specific relocation and cost sharing processes under the [*Emerging Technologies*] framework generally varies for each frequency band, and is based on the types of incumbent licensees and particular band characteristics."<sup>30</sup>

Reimbursing earth station users for the costs of transition to fiber fits comfortably within the current understanding of the *Emerging Technologies* framework.<sup>31</sup> Fiber and satellite both

<sup>&</sup>lt;sup>26</sup> Comments of C-Band Alliance at 17-18, GN Docket No. 18-122 (Oct. 29, 2018); Letter from Jennifer D. Hindin, Counsel to C-Band Alliance, to Marlene H. Dortch, Secretary, FCC, attachment at 1, GN Docket No. 18-122 (Dec. 19, 2018) ("Intelsat and SES anticipate that the CBA plan will require them to procure a total of 8 new satellites and, if the CBA plan is accepted, they are prepared to do so."); *see also* Comments of the Boeing Company, at 3, GN Docket No. 18-122 (Dec. 11, 2018).

<sup>&</sup>lt;sup>27</sup> See Letter from Henry Gola, Counsel to the C-Band Alliance, to Ms. Marlene H. Dortch, Secretary, FCC, at 1, GN Docket No. 18-122 (Mar. 7, 2019) ("Including more than 17,000 earth stations in 416 separate PEA auctions with 416 different sets of participants would exacerbate the holdout problem and add insurmountable complexity and delay.").

<sup>&</sup>lt;sup>28</sup> Reply Comments of the C-Band Alliance, at 14-17, GN Docket No. 18-122 (Dec. 7, 2018).

<sup>&</sup>lt;sup>29</sup> AWS Relocation Order, 21 FCC Rcd at 4479 ¶ 11 n.35.

<sup>&</sup>lt;sup>30</sup> AWS-4 Report & Order, 27 FCC Rcd at 16208 ¶ 289.

<sup>&</sup>lt;sup>31</sup> See AWS Relocation Order, 21 FCC Rcd at 4485 ¶ 21 ("Under the Emerging Technologies policy, the Commission allows new entrants to provide incumbents with comparable facilities using any acceptable technology. Incumbents must be provided with replacement facilities that allow them to maintain the same service in terms of: (1) throughput – the amount of information transferred within the system in a given amount of time; (2) reliability – the degree to which information is transferred accurately and dependably within the system; and (3) operating costs – the cost to operate and maintain the system." (footnotes omitted)); see also 47 U.S.C. § 923(g)(3)(B)(ii) (defining "comparable capability of systems" to include "the acquisition

enable the wholesale distribution of programming and other content from their sources to entities that retransmit that content to their customers. Fiber offers a comparable means of enabling earth station operators to maintain their same services in terms of throughput, reliability, and operating costs. Moreover, as noted above, converting incumbent earth station licensees to fiber-based delivery will help maximize the amount of C-Band spectrum that can be repurposed and facilitate a speedier deployment of new services in the C-Band. It will also help promote the deployment of fiber facilities in rural areas, enabling rural consumers to continue to receive the services that previously utilized C-Band satellite delivery and providing a foundation for fiber networks that can be used for additional purposes.

In crafting the *Emerging Technologies* framework, the Commission has recognized that to best "facilitate [the] rapid implementation of new services" it is important to provide "flexibility in the relocation process."<sup>32</sup> The Commission also acknowledged that "[a] number of different design factors will vary in importance in each incumbent's system, and therefore . . . [declined] to adopt a specific definition of comparable facilities and [instead] allow[ed] parties . . . to negotiate mutually agreeable terms for determining comparability . . . [recognizing though] that comparable facilities must be equal to or superior to existing facilities."<sup>33</sup> For instance, in transitioning the 2150-2160/62 MHz band from Broadband Radio Service ("BRS") operations to Advanced Wireless Service ("AWS"), the Commission concluded that "advances in technology, *e.g.*, changing from analog to digital modulation and the flexibility provided by

of state-of-the-art replacement systems intended to meet comparable operational scope, which may include incidental increases in functionality").

<sup>&</sup>lt;sup>32</sup> In re Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, Third Report and Order and Memorandum Opinion and Order, 8 FCC Rcd 6589, 6603 ¶ 36 (1993).

<sup>&</sup>lt;sup>33</sup> *Id*.

[its] existing relocation procedures . . . should be taken into account when providing comparable facilities."<sup>34</sup> This reasoning is as applicable today as it was then, and thus the Commission should find that reimbursing incumbent C-Band earth station licensees for their transition to fiber is a reasonable and worthwhile investment that will offer dividends for years to come.

Finally, as Commission licensees, earth station operators should also be found eligible for incentive payments for relinquishing their spectrum usage rights.<sup>35</sup> As Charter has suggested, the Commission has authority under Title III of the Act to require such a payment even outside the context of an incentive auction in order to compensate incumbents for intangible or other costs related to relinquishing spectrum or for the value of their relinquished spectrum. Such a payment could be calculated as a percentage of auction revenues.<sup>36</sup> As Charter and others have noted, the Commission has previously recognized that payments for spectrum rights over and above relocation costs are in the public interest and within the Commission's authority to approve.<sup>37</sup>

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<sup>&</sup>lt;sup>34</sup> AWS Relocation Order, 21 FCC Rcd at 4487 ¶ 24 (emphasis in the original).

 $<sup>^{35}</sup>$  See 47 U.S.C.  $\S$  309(j)(8)(G)(i); Charter Feb. 22 Ex Parte.

<sup>&</sup>lt;sup>36</sup> See In re Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, First Report and Order, 15 FCC Rcd 476, 533-34 ¶¶ 142-145 (2000) ("700 MHz First Order") (permitting new licensees in the 700 MHz band to reach voluntary agreements with incumbent licensees "that would compensate incumbents for: (1) converting to DTV-only transmission before the end of the statutory transition period; (2) accepting higher levels of interference than allowed by the protection standards; or (3) otherwise accommodating new licensees" (footnotes omitted)); see also In re Service Rules for 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, Memorandum Opinion and Order and Further Notice of Proposed Rulemaking, 15 FCC Rcd 20845, 20863-67 ¶¶ 46-53 (2000) ("700 MHz MO&O") (finding that the Commission had statutory authority under Sections 309(j)(14) and 337(d)(2) of the Act to review and approve voluntary agreements between incumbent broadcasters and new 700 MHz band wireless licensees to expedite the clearing process).

<sup>&</sup>lt;sup>37</sup> See, e.g., Letter from Scott Blake Harris et al., Counsel to the Small Satellite Operators, to Ms. Marlene H. Dortch, Secretary, FCC, at 3-5, GN Docket No. 18-122 (Mar. 25, 2019) (stating that the Commission can order certain payments that serve the public interest); *Mobile Commc'ns Corp. of Am. v. FCC*, 77 F.3d 1399, 1406-07 (D.C. Cir. 1996) (holding that the FCC has authority to require payment for a license if it finds that the payment is "necessary to 'ensure the achievement of the Commission's statutory responsibilit[y]' to grant a license only where the grant would serve the public interest, convenience, and necessity" (citation omitted) (bracket in original)); 700 MHz First Order, 15 FCC Rcd at 533-34 ¶¶ 142-145 (permitting new licensees in

#### CONCLUSION

For the foregoing reasons, the Commission should affirm that receive-only earth station registrants are licensees under the Communications Act that are eligible to be compensated for the costs of transitioning from a satellite-based delivery model to a fiber-based one as part of the reallocation of the C-Band for 5G use. Adopting such an approach will achieve the goals of both increasing the amount of C-Band spectrum that is made available for terrestrial use and ensuring that the C-Band is repurposed for 5G as quickly and efficiently as possible. Achieving these dual objectives will enhance the United States' future in delivering advanced mobility services, as well as strengthen the country's leadership position in the global race to 5G.

Respectfully submitted,

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the 700 MHz band to reach voluntary agreements with incumbent licensees); see also 700 MHz MO&O, 15 FCC Rcd at 20863-67 ¶¶ 46-53 (finding that the Commission had statutory authority under Sections 309(j)(14) and 337(d)(2) of the Act to review and approve certain voluntary agreements).